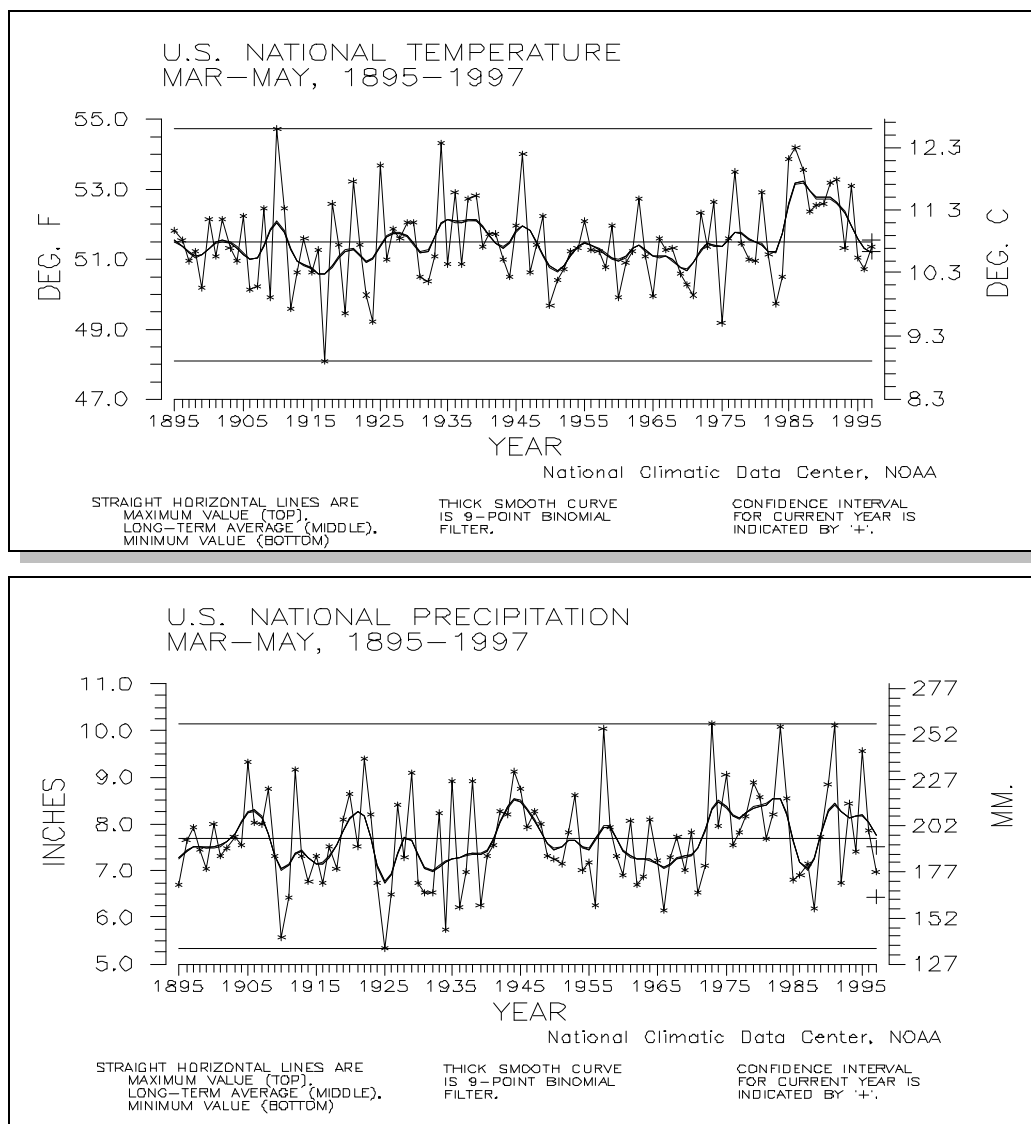


Monthly Activity Report

May 1997

National Climatic Data Center

A National Resource for Climate Information



Preliminary data for spring (March-May) 1997 indicate that temperature averaged across the contiguous United States was at the long-term mean ranking as the 50th warmest spring since 1895 (top figure). About 13 percent of the country was much warmer than normal while about 17 percent of the country was much cooler than normal.

Spring 1997 was the 26th driest such season since 1895 (bottom figure). Over 15 percent of the country was much drier than normal while about 7 percent of the country was much wetter than normal.

G7 Plus 1 Environmental Ministers Meeting

On May 5, Thomas R. Karl, Senior Scientist at the National Climatic Data Center (NCDC), was the luncheon speaker at the G7 Plus 1 Environmental Leaders Meeting in Coral Gables, Florida. The meeting was hosted by the U.S. with the Environmental Ministers from the U.S.A. (EPA Administration), Japan, Germany, Italy, France, United Kingdom, Canada, Russia, and the European community. Positions on Global Warming were being formulated for the meeting next month to be hosted by President Clinton in Denver, Colorado. Karl's presentation focused on extremes of weather and climate associated with Global Warming as outlined in the recent Scientific American publication.

User Fee Increase

On May 7, 1997, a new schedule of fees for access to NOAA environmental data and information was published in the Federal Register. Fees for many NESDIS products and services have been increased in an effort to recover the cost of upgrading the data handling capabilities at all three NOAA data centers. Universities, government, and other nonprofit organizations will not be affected by this increase. The new fees are scheduled to go into effect on June 9, 1997.

Public Employee Recognition

On Wednesday, May 21, 1997, the Asheville-Buncombe Excellence in Public Service Awards breakfast was held and attended by more than 200 people. The National Climatic Data Center had several nominees: Karol Pittman, Outstanding Professional Employee; Katherine Fincher, Equal

Opportunity Service; and Dick Davis, Hoyt Abney Outstanding Community Service. Katherine Fincher and Dick Davis were the winners in their respective categories. In addition, Dick Davis was also selected as the overall winner and as such received the Asheville-Buncombe Outstanding Employee of the Year Award.

NCDC Recipient of 1996 Federal Woman of the Year Award

Karol Pittman, National Climatic Data Center, Operations and Support Division, Systems Branch, was selected as the 1996 Federal Woman of the Year by the Asheville area Federal Women's Program Council. She was chosen from a field of 15 outstanding nominees from the local Federal sector. Ms Pittman's list of accomplishments coupled with her integrity, keen insight into personal relationships, and devotion to family, truly represent an excellent role model for both women and men in Federal service. This marks the second consecutive year that an NCDC employee has won this prestigious award.

Manuscript Rescue Project

The shipment of manuscript records to Integrated Document Management (IDM) Morgantown, West Virginia, is progressing smoothly. During May a total of four shipments were made. There is now a total of 3,300 unit boxes (one million records) at the IDM facility. The first digital images have begun to arrive back at NCDC with three CD-ROMs containing 100,000 images arriving by the end of the month. The Orkand effort to conduct quality assurance on the images is beginning to take shape. Meanwhile, the selection of a Document Management System

(DMS) is nearing completion. Data rescue funding will be used to purchase the required software and hardware.

Paper Copies—Thing of the Past

This issue of the NCDC Monthly Activity Report is the last one that will be distributed in paper form. The reports are now available on-line at

<http://www.ncdc.noaa.gov/about/activityreports/activityreports.html>. A link to download a free copy of the Adobe Acrobat Portable Document Format Reader that is required to view and print the reports can also be found on the report page. Anyone wishing to continue receiving a paper version needs to call Terri Esham at (704) 271-4238.

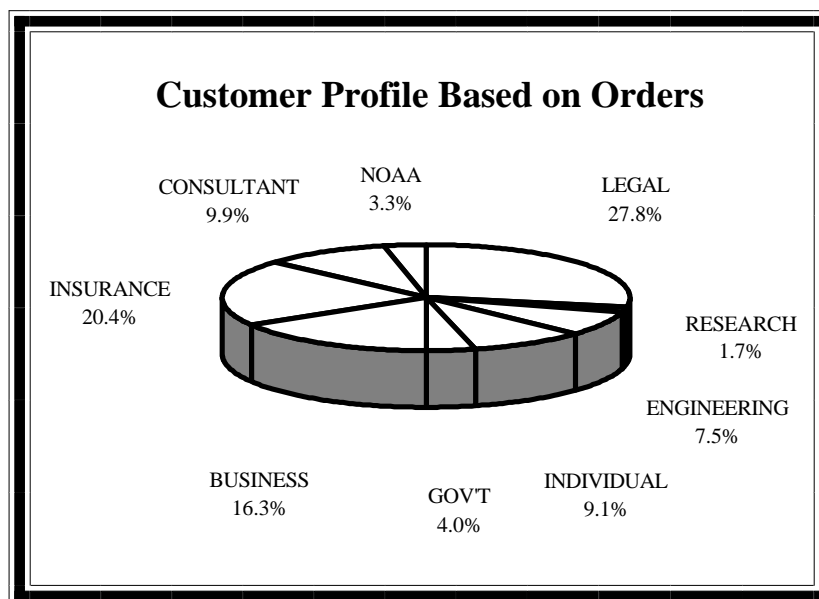
CLIMATE DATA AND INFORMATION SERVICES

♦ Data Base Development

Transcribing Historical Data from GOES 8 and 9 to Begin

The National Climatic Data Center (NCDC) has transferred funds to the Cooperative Institute for Meteorological Space Studies (CIMSS) at the University of Wisconsin to begin transcribing historical data from Geostationary Operational Environmental Satellite (GOES) 8 and 9 (1994 to the present) onto 10 gigabyte IBM 3590 tapes. A project to archive future data onto 3590 tapes is well ahead of schedule. This funding is part of a rescue effort being mounted to save the endangered GOES archive. Funds from the Environmental Sciences

Data Information Management (ESDIM) and Pathfinder programs, as well as the science community are being transferred to raise funds to rescue the entire GOES archive. A workshop is planned for the summer of 1997 in Asheville, North Carolina. Interested members of the science community will be invited to participate in developing a plan to allow access to the entire



GOES archive for product development in return for contributing funding to the rescue effort.

Digital Data Rescue and Migration

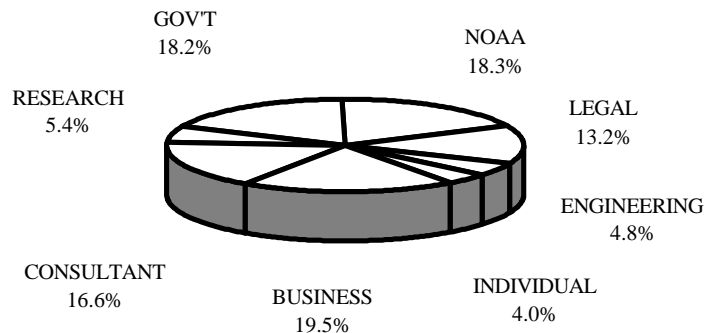
As part of the Environmental Sciences Data Information Management (ESDIM) data rescue effort, NCDC has performed the following activities:

- (1) Archived back-up copies of 93,335 reels of NOAA Polar Orbiter Level 1B data since November 1991. The period of record of this data set is October 1991 thru the present (operational).
- (2) Archived 4,713 gigabytes of Next Generation Weather Radar (NEXRAD) Level II radar data on 419 exabyte tapes for the NEXRAD Project.
- (3) Archived 46 gigabytes of radar data on 161 NEXRAD Level III disks.
- (4) Archived library and back-up copies of NOAA Polar Orbiter Level 1B (TD-3602). The period of record of these data is November 1978 thru March 1985. NCDC has rescued 23,139 cartridges from a total of 25,440 input cartridges of Level 1B and products. The total project rescue is 91 percent completed.

Fourteen Months of GOES Full Earth Imagery Added to Historical GOES Browse Server

Data holdings for National Climatic Data Center (NCDC) Historical Geostationary Operational Environmental Satellite (GOES) Browse Server (HGBS) have been expanded to include 14 months

Customer Profile Based on Reimbursables



of GOES full-earth imagery. These 24-km resolution imagery date from October 28, 1995, to December 14, 1996, and include daily (18:00 UTC) visible and infrared scenes for both the GOES east and west satellites. The full-earth imagery is in addition to the existing northern hemisphere browse imagery dating from December 14, 1996, to the present. Future plans for the server include the addition of GOES full-earth imagery dating back to mid-1992. NCDC's world wide web statistics show increasing usage of the HGBS since it was placed on-line in January 1997.

CD-ROM Project

NCDC personnel completed the development of the Technical Documentation CD-ROM. The CD-ROM includes the NOAA Polar Orbiter Data Users Guide, Global Vegetation Index (GVI) Users Guide, as well as sample imagery and digital data for some of the corresponding data described in the documents. Additionally, NavRoad, an off-line HTML browser, was included to give users without internet access the capability to view the CD-ROM.

DMSP Marshall Project

As of May 6, 1997, products from the Defense Meteorological Satellite Program (DMSP) F-14 satellite are now archived at NCDC. Originally the F-12 satellite was scheduled to be turned off on April 28, 1997, but this decision was reversed. Problems with the F-12 satellite were encountered throughout the month of May and some days are missing from the archive. However, we are hopeful all problems have now been corrected.

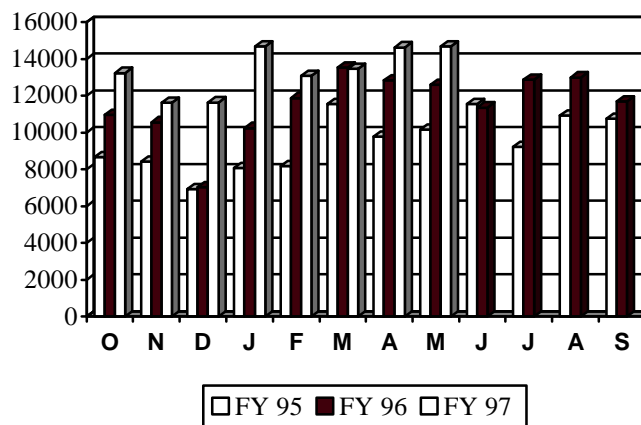
NCDC contacted all of their DMSP standing order customers to determine how many of them were interested in receiving data from the F-14 satellite. The response was good and the number of output tapes NCDC provides to these customers changed from 54 to 76 tapes per month.

♦ Data and Information Distribution

White House Gets Needed Data and Reference Information on Natural Disasters

A researcher with the Environmental Division of the Office of Science and Technology Policy (OSTP), Executive Office of the President, obtained several NCDC reports dealing with Natural Disasters. The researcher used information given in NCDC's Billion Dollar Disaster Report as part of a briefing sheet for the President's Science Advisor, Jack Gibbons, on the costs per year of natural disasters during the time period 1989-1997. NCDC's Climate Services Division (CSD) also supplied additional reports,

NCDC Off-Line Customer Contacts



including the 1993-1995 Natural Hazard Statistics report which gives damages and deaths for individual states.

Research Customer Service Group (RCSG) On-Line Systems

During April 1997, the on-line systems developed and maintained by the RCSG showed a total of nearly 28 gigabytes of data downloaded for the month. This compared with approximately 16 gigabytes for the same month last year. These systems include various technical reports and weather event pages, data sets such as cooperative station precipitation and global summary of day, satellite images of hurricanes and other storms, and inventories of selected data sets. Users range from news media usage of weather event reports to research usage of global daily data to queries of hourly data inventories by customers placing off-line orders.

Aerosol Optical Thickness (AOT) Update

NCDC will be providing selected aerosol optical thickness (AOT) data on-line in conjunction with a Satellite Active Archive (SAA) project. The SAA Lite, which provides smaller data sets on-line, will provide reprocessed Pathfinder AOT data. NCDC will provide additional AOT data not offered on the SAA Lite. Dr. Larry Stowe, NESDIS Office of Research and Applications, is working with NCDC's Wayne Faas to provide a program which will plot retrospective AOT data on a 2 x 2 degree grid.

FY 97 Funds for ISCCP Sought From ESDIM

In response to the Office of Global Programs reducing the FY 97 International Satellite Cloud Climatology Project, NCDC will only be able to process 7 out of 12 months for both NOAA-12 and NOAA-14 B2 data. NCDC has submitted a Letter of Intent to ESDIM in hopes of making up the deficit.

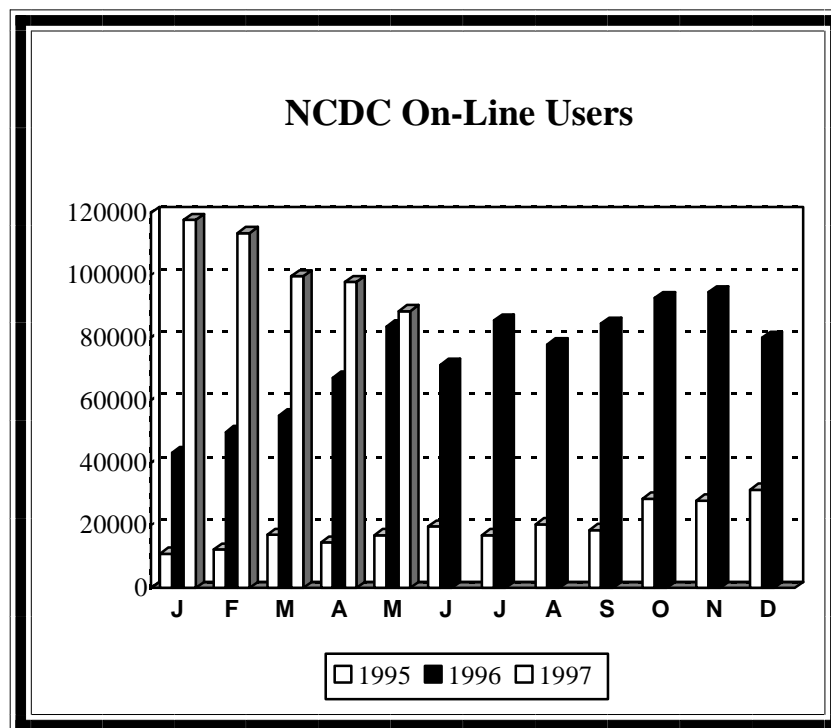
Metadata Improved

Documentation for a new data set has just been placed on-line (tape deck documentation (TDDOC) and Climate Services (CLISERV). The document is for TD9644 entitled: World Weather Records. This document is the first digital documentation available on-line for TD9644. The data format was changed beginning with the 1961-70 decadal series.

The documentation was prepared by Tim Owen, Global Climate Lab, Climate Perspectives Branch, as a participant in the Adopt-a-Data-Set program.

Version 2 of the Global Historical Climatology Network

Tom Peterson of NCDC announced that the Global Historical Climatology Network (GHCN) Version 2 temperature data set was released, consisting of monthly means of daily maximum, minimum, and/or mean temperature from 7,280 land surface weather stations. (The period of record is 1701 to 1997.) This release includes a wide variety of station metadata such as population and vegetation indicators. The project was a cooperative effort among NCDC, the Arizona State University, and the Carbon Dioxide Information Analysis Center.



NEXRAD Level II Merge Support

Software to perform post merge processing was completed. It consists of four main functions: (1) identifying and manipulating a file of the merge input tapes (N-tapes; (2) identifying and scratching all the original W-tapes from STAR on the UniSys via a batch process; (3) scratching all the selected N-tapes and making them available for reuse on the NEXRAD workstations; and (4) purging information from working disk files and batch run files.

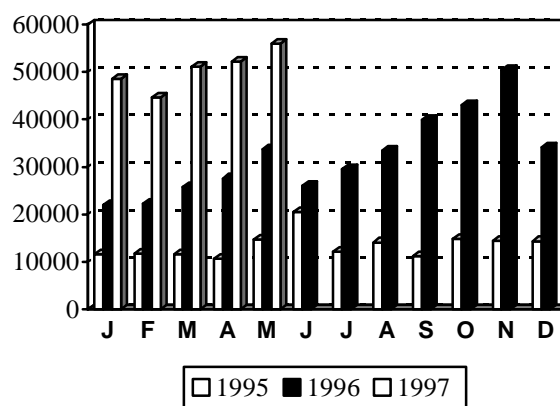
NCDC's Larry Griffin discovered that occasionally data files on NEXRAD level II tapes contain only status message records and no radial data. These occurrences were not being identified in the volume coverage pattern (VCP) inventory generated by the copy and reformat of original tapes and by the VCP inventory generated by the merge program. Modifications were made and implemented on May 20, 1997, to identify these events. All other aspects of level II processing will be evaluated to determine how they will be affected by these changes.

♦ Research Customer Service Group Requests

Former USSR Data Used in NASA Research Study

A researcher with NASA's Space Geodesy Group obtained a long-term daily data set for stations in the former Soviet Union from NCDC's Research Customer Service Group. The researcher obtained daily temperature and precipitation time-series data from several hundred stations extending back into the early 1800s. This long-term data base will allow the researcher to expand his study to cover a

NCDC Data Downloaded



150-year period. He is looking for evidence of global climate change and its effects on Russian regional and national grain fluctuations. The researcher, who has also been using historical climate data available in the NOAA library in Silver Spring, Maryland, will cite NCDC as a contributor in his analysis and will provide the Center with any additional data used in the analysis.

Asbestos Drift Concerns

A consulting firm obtained wind rose data from the Research Customer Service Group for use in a lawsuit involving asbestos drift from a manufacturing plant. The distance to which asbestos can drift has been determined to be limited when precipitation occurs. NCDC's wind rose program provides for the production of wind speed versus wind direction tabulations based upon the occurrence of specific types of precipitation or visibility conditions. The consulting firm obtained

precipitation and non-precipitation wind roses for the area where the manufacturing is located to determine the percentage of time a cancer victim could have been exposed to asbestos from the plant.

♦ Interesting Requests

Strong Winds Affect NOAA Satellite Antenna

The National Climatic Data Center (NCDC) has been contacted by the National Oceanic & Atmospheric Administration's (NOAA) National Weather Service (NWS) Advanced Weather Interactive Processing System (AWIPS) Acquisition Office in Silver Spring, Maryland. This NOAA office has been tasked with installing a satellite antenna on the roof of their 18-story building and required wind data for use in their site study. The NCDC provided new 10-year FAA 36-point wind analyses for both Baltimore-Washington International Airport and Washington-Dulles Airport. NCDC's Global Upper Air Climatic Atlas CD-ROM provided the office with appropriate wind climatological data. The NCDC will receive a similar satellite antenna which will be installed at or near the Center later this year.

Assistance Provided to National Audubon Society

The National Climatic Data Center (NCDC) is assisting the New Jersey chapter of the National Audubon Society with their yearly bird count. Teams of spotters compete to see who can identify and count the most birds during the bird counting event. A protest has been filed with the judges against last year's champions as to the validity of their count. The protestors claim the winning team could not have spotted as many birds as claimed in

one day. The reigning champion team is defending the team and attributes it to local meteorological conditions. The NCDC provided daily weather maps that show an intense low pressure system along the New Jersey coast that caused strong on-shore winds for several days before and during the contest.

White House Provided Needed Data and Reference Information on Natural Disasters

A researcher with the Environmental Division of the Office of Science and Technology Policy (OSTP), Executive Office of the President, obtained a number of National Climatic Data Center (NCDC) reports dealing with Natural Disasters. The researcher used information given in NCDC's Billion Dollar Disaster Report as part of a briefing sheet for the President's Science Advisor, Jack Gibbons, on the costs per year of natural disasters during the time period 1989-1997. NCDC also supplied additional reports, including the 1993-1995 Natural Hazard Statistics report which gives damages and deaths for individual states.

Risk Management

The Academia Press at the University of North Carolina-Charlotte contacted National Climatic Data Center (NCDC) to obtain climatological data which will be used to help reduce some of the risks taken during athletic activities. The publishers are writing a book entitled *Risk Management of Sports* and want to include in their formula the likelihood and location of various weather related accidents that might occur during a sporting event. Statistics on lightning, tornadoes, hurricanes, heat-waves, and blizzards were provided.

SCIENTIFIC AND PROFESSIONAL ACTIVITIES

♦ Working Groups/Committees/Meetings

EOS Long-term Archive

The National Climatic Data Center (NCDC) Deputy Director, Kenneth D. Davidson, participated in an Earth Observing System (EOS) long-term archive meeting recently in Washington, DC. NESDIS Assistant Administrator Robert Winokur requested a prototype system be built. The group will be undertaking that effort at Goddard with NASA funding over the next several months. They plan to use 1A Total Ozone Measuring Satellite (TOMS) data and product data bases from the Office of Satellite Data Processing and Distribution. Plans are to eventually service EOS customers from Asheville using the data stored in Goddard NOAA facility.

HEED Global Change

The NOAA/NASA program on Health, Ecology and Economic Dimensions (HEED) of Global Climatic Change held its second major conference at Harvard University May 21-23, 1997. During the first year and half of activities, HEED has compiled a major data base of U.S. Atlantic and Caribbean ecological episodes (such as marine mammal strandings, red tide, fish kills, and human disease outbreaks). As the project enters its second phase, climatic data from the affected regions will be collected and entered into the data base. NCDC's Chief of the Global Climate Laboratory, Rob Quayle, is the climate data investigator on the team.

NCDC Hosting EOSDIS User Services Working Group

On June 3-5, 1997, the Earth Observing System Data and Information System (EOSDIS) User Services Working Group (USWG) will convene at the National Climatic Data Center. The purpose of this group is to focus on customer service issues for the EOSDIS project, ensuring that tools and facilities are in place to provide data and support to the EOSDIS user community. The NASA EOSDIS management team considers the USWG to be the front line in customer services and the input from the group to be essential in building a system that is successful. The group has been in existence for seven years. NOAA has been a welcomed participant since the first meeting in 1990 with representatives from all three NOAA data centers included in the membership.

Contract Support to NOAA Virtual Data Systems (NVDS)

Messrs. John Cappelletti and Bill McMullan of Mitretek Systems, in contract support of the NOAA Virtual Data System (NVDS) program, visited the National Climatic Data Center (NCDC) on May 14-20, 1997. Mitretek is involved in the analysis and planning for NVDS architecture development and for initiatives to increase the efficiency of data center processes. Mitretek will be assisting NCDC's Climate Services Division (CSD) in the development of an architectural plan that will facilitate more efficient operations. Mitretek representatives interviewed key NCDC managers responsible for systems which support CSD operations.

NEXRAD User Workshop

The National Climatic Data Center is planning a Next-Generation Weather Radar (NEXRAD) Users Workshop to be held at NCDC on November 18-20, 1997. The objectives of the workshop are to: 1) update users on data processing and archive procedures; 2) develop user services to improve access to NEXRAD data and information; 3) receive feedback from users on ways to improve data access and service; 4) update users on NWS plans for conversion to an open-system architecture; 5) review NEXRAD display and analysis software; and 6) provide for exchange of information on precipitation and wind analysis techniques used in various research projects.

♦ Visitors

Visitor from the People's Republic of China

Professor Xu Jianping of the China Meteorological Administration's National Satellite Meteorological Center toured NCDC-Suitland facilities on May 8, 1997. In addition, the professor received a briefing on NCDC's satellite archive and customer servicing operations.

♦ Interactions with NOAA Line Offices

Customer Order Management Processing System (COMPS)

Implementation of the COMPS system at the National Oceanographic Data Center (NODC) in Silver Spring is still planned for the month of June. NODC users will receive training and will begin the process of migrating operations from current system(s) to the new COMPS system with the assistance of contract personnel.

COMPS team members and System Acquisition Office as well as other data center personnel, continue to review and update the System Specification/Sub-specification (SSS) document. This Build Two version of the SSS will be used to continue development of COMPS in preparation for NCDC, the National Geophysical Data Center, the Satellite Active Archive, and on-line ordering implementation.

Level II Data Provided to the National Weather Service

The NCDC provided over 30 days of NEXRAD Level II data to the National Weather Service (NWS) Office in Taunton, MA. The data spanned portions of the April through December 1996 period and were provided on 8mm tape--over 40 gigabytes of data in all. The NWS is using the data to study a number of severe weather and rainfall events during 1996.

NCDC Daily Extreme Tabulations Provided to National Weather Service Forecast Office

The National Climatic Data Center (NCDC) provided a daily extreme tabulation for Lancaster, California, to the National Weather Services Forecast Office (NWSFO) in Los Angeles. The tabulation combined two historical cooperative stations in Lancaster, which is in the high desert area of California, and covered the period from 1948 through 1996. The tabulation presents daily averages and extremes of temperature, precipitation, and snowfall for the period. The tabulation will be used in designing a climatology package used by the NWSFO in their daily forecast operations. A copy of the complete climatology package will also be sent to NCDC to be archived.

EMPLOYEE ACTIVITIES

♦ EEO and Community Outreach

NCDC Participates in Local Career Days

Tom Ross was an invited participant at two local Career Day Fairs. The Career Day concept invites professionals in various fields to visit local schools and share information about their particular career field. Students chose in advance what professions they want to learn about and then they meet with those particular individuals. Mr. Ross discussed the educational requirements needed to become a professional meteorologist as well as explaining the difference between weather forecasting, climatology, and computer modeling. Students also received information on safety rules associated with lightning, tornadoes, and hurricanes. The students learned about National Oceanic and Atmospheric Administration (NOAA) satellites and received some NCDC educational materials and satellite photos.

Federal Awards Recognition Reception

The second annual reception to recognize the Veach-Baley Federal Complex employees who were nominated for this year's Excellence in Public Service and Federal Woman of the Year Awards, as well as recipients of the DOC Bronze Medal and NOAA Administrator's Award was held recently at the National Climatic Data Center. This year's reception also extended to the employees who were recognized in a local contest sponsored by the Equal Employment Opportunity Advisory Committee for the "Best of the Federal Climate Complex" where employees were selected

by co-workers for their outstanding traits (such as Most Helpful, Most Effective, etc.). Cake and coffee were served to nearly 200 employees who dropped by to congratulate the nominees, nominators, and winners from the participating agencies including the National Climatic Data Center, the Air Force Combat Climatology Center, and the Internal Revenue Service.

♦ Training

Object Oriented Training

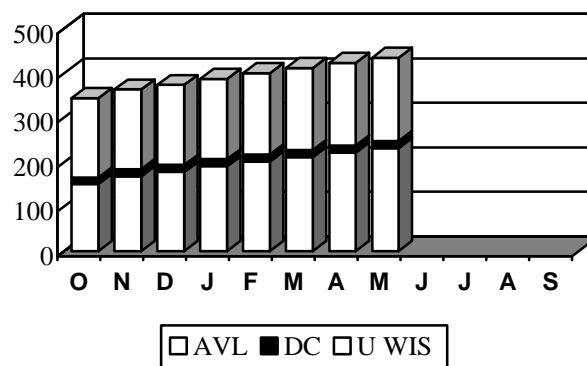
Andy Goss, Dee Dee Anders, and Steve Fleming all successfully completed the Object Oriented Technology class at UNC-Asheville. Tom Whitehurst successfully completed the C++ course at UNC-Asheville.

Training Spanning Over Nine Months is Completed

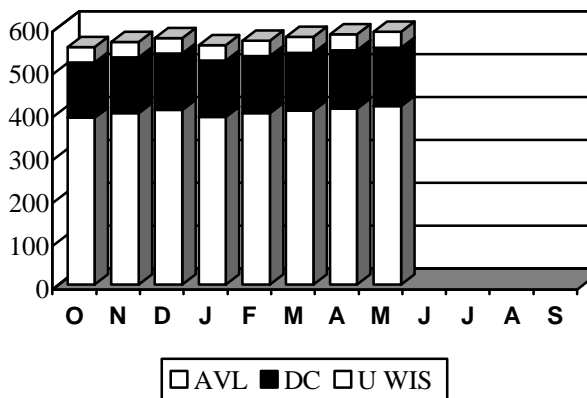
Karol Pittman successfully completed the Management Leadership Training course offered locally through the Huff Associates Training Center in Black Mountain. The course involves consecutive two-day sessions (one per month for nine months) covering assessment skills, team building, individual motivational techniques, development and tracking of mission statements, and other management related issues. Ms. Pittman culminated her studies by participating in the personal "challenge by choice" ropes course during the last session.

NCDC Data Volumes

Total
Archive
(Terabytes)



Total
Archive
(Kilo Media)



Monthly
Activity
(FY 97)

